

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



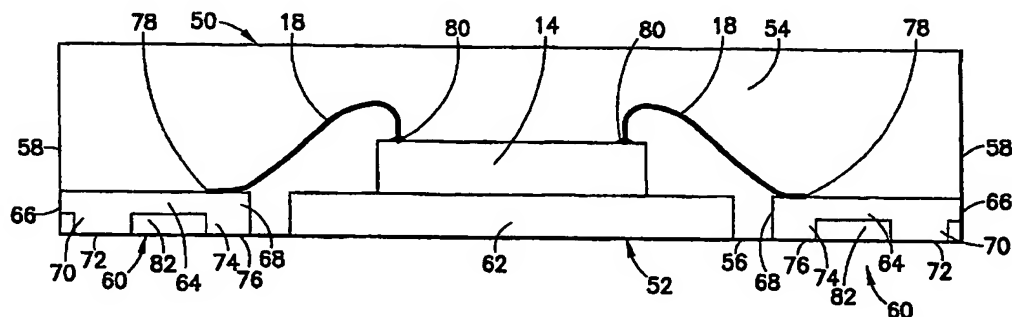
(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/017968 A2

- (51) International Patent Classification⁷: **H01L**
- (21) International Application Number:
PCT/US2004/026152
- (22) International Filing Date: 11 August 2004 (11.08.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/494,982 14 August 2003 (14.08.2003) US
- (71) Applicant (for all designated States except US): **ADVANCED INTERCONNECT TECHNOLOGIES LIMITED** [MU/MU]; c/o Valmet (Mauritius) Limited, 608 St. James Court, St. Denis Street, Port Louis (MU).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ISLAM, Shafidul** [US/US]; 3829 Lakedale Drive, Plano, TX 75025 (US). **LAU, Daniel, Kwok**; 395 Stonecrest Drive, San Francisco, CA 94132 (US). **SAN ANTONIO, Romarico Santos** [PH/ID]; Taman Duta Mas, Block A03-9, Batam Island 29433 (ID). **SUBAGIO, Anang** [ID/ID]; Taman Mediterania, Block GG2/No. 39C, Batam Island 29433 (ID). **MCKERREGHAN, Michael Hannan** [US/US]; 3028 Randy Lane, Farmers Branch, TX 75234 (US). **LITLIT, Edmunda, Gut-Omen** [PH/PH]; 180 Victoria Village, Baguio City (PH).
- (74) Agents: **OLSON, Timothy J. et al.**; Wiggin and Dana LLP, One Century Tower, P.O. Box 1832, New Haven, CT 06508-1832 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SEMICONDUCTOR DEVICE PACKAGE AND METHOD FOR MANUFACTURING SAME



(57) Abstract: A lead frame (52, 100, 112) for a semiconductor device (die) package (50, 102, 110) is described. Each of the leads (60) in the lead frame (52, 100, 112) includes an interposer (64) having one end (66) disposed proximate the outer face (58) of the package (50, 102, 110) and another end (68) disposed proximate the die (14). Extending from opposite ends of the interposer (64) are a board connecting post (70) and a support post (74). A bond site (78) is formed on a surface of the interposer (64) opposite the support post (74). Each of the leads (60) is electrically connected to an associated input/output (I/O) pad (80) on the die (14) via wirebonding, tape bonding, or flip-chip attachment to the bond site (78). Where wirebonding is used, a wire electrically connecting the I/O pad (80) to the bond site (78) may be wedge bonded to both the I/O pad (80) and the bond site (78). The support post (74) provides support to the end (68) of the interposer (64) during the bonding and coating processes. (Figure 3)

WO 2005/017968 A2